UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,141	09/23/2003	Sherif Yacoub	200300101-1	2017

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EXAMINER
SAINT CYR, LEONARD

ART UNIT	PAPER NUMBER
2626	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-20_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-20_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1 –5, 8 – 20 are rejected under 35 U.S.C. 102(e) as being anticipated by

Murveit et al., (US Patent 7,058,573).

As per claims 1, 8, and 14, Murveit et al., teach an automatic speech recognition

(ASR), that comprises:

receiving a speech utterance from a user; assessing resources of a plurality of

different ASR engines ("multi-pass speech recognition"; col.2, lines 1 – 4);

assigning the speech utterance to a single ASR engine if assessing resources is

within a threshold value (col.3, lines 4 – 6);

assigning the speech utterance to a plurality of different ASR engines if

assessing resources is within a threshold value ("the results of the first pass are

insufficient to correctly identify the spoken input, a second pass speech recognition is

performed"; col.2, lines 64 – 67); and

generating text ("output recognized words") of the speech utterance with either

the single ASR engine or plurality of ASR engines (col.9, lines 57 – 60).

As per claims 2, and 9, Murveit et al., further disclose monitoring port utilization

for each ASR engine ("certainty higher than a predetermined threshold, a second pass

is not performed"; col.3, lines 4 – 7).

As per claims 3, and 10, Murveit et al., further recite evaluating processing power

(col.2, line 23).

As per claim 4, Murveit et al., further disclose monitoring memory utilization and

input/output utilization ("beginning the second pass by removing the spoken input from

the buffer beginning with the starting address..."; col.8, lines 48 – 55).

As per claim 5, Murveit et al., further disclose monitoring a number of users

providing speech utterances ("distinguish the callers channel type"; col.7, lines 17, and

18).

As per claim 11, Murveit et al., further disclose combing results of ASR engines if

the group of ASR engines is selected, the group of ASR engines being adapted to

provide a more accurate recognition of the utterance than a single ASR engine

("performs a second pass speech recognition technique on the spoken input according

to the first pass results"; col.2, lines 62 – 64).

As per claim 12, Murveit et al., further disclose evaluating resources of the system evaluates resources to simultaneously run multiple ASR engines (" simultaneously performed"; col.9, lines 51 – 56).

As per claim 13, Murveit et al., further disclose evaluating resources of the system evaluates ASR ports, system resources ("beginning the second pass by removing the spoken input from the buffer beginning with the starting address..."), and call handlers ("distinguish the callers channel type"; col.7, lines 17, and 18; col.8, lines 48 – 55).

As per claim 15, Murveit et al., further disclose selecting an ASR engine that has most available resources ("a first pass is assigned a certainty that is higher than a predetermined threshold, a second pass is not performed"; col.3, lines 4 – 7).

As per claims 16, and 17, Murveit et al., further disclose a telephone network comprising at least one switching service point coupled to the computer system, wherein at least one communication device in communication with the switching service point to provide the speech utterance ("telephone system"; col.4, lines 26, and 27).

As per claims 18 - 20, Murveit et al., further disclose that the resource

management application comprises a recognition proxy component and a resource

monitoring component, wherein the resource management component collects and

analyzes information about the resources available on the system, and wherein the

resource monitoring component mediates between the plurality of ASR engines and the

resource management component ("determination is made as to characteristics of the

spoken input based upon the results of the first pass; this determination is then utilized

to select a most appropriate speech recognizing system; col.7, lines 3 – 14).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Murveit et al., (US Patent 7,058,573).

As per claim 6, Murveit et al., do not specifically teach assigning the speech

utterance to a single ASR engine if assessing resources is within a threshold value   -

occurs when port utilization of the single ASR engine is lower than a port utilization

threshold of about 80%.

However, since Murveit et al., teach that if one of the expressions identified by

the first pass is assigned a certainty that is higher than a predetermined threshold (e.g.

95%), a second pass is not performed. The predetermined threshold can be set at a

certainty of ninety-five percent, though it will be apparent that the predetermined

threshold can be set at another level (col. 3, lines 4 – 7; col.5, lines 53 – 56). One

having ordinary skill in the art would found it obvious to assign the speech utterance to a

single ASR engine if assessing resources is within a threshold value occurs when port

utilization of the single ASR engine is lower than a port utilization threshold of about

80% within Murveit et al., because that would maintain a high degree of recognition

accuracy in the speech recognition system (col.2, lines 32 – 34).

As per claim 7, Murveit et al., do not specifically teach assigning the speech

utterance to a plurality of different ASR engines if assessing resources is within a

threshold value occurs when port utilization of two ASR engines is lower than a

predefined threshold of about 75%.

However, since Murveit et al., teach that if the results of the second pass are not

sufficiently definite, yet another pass can be performed; one, two or more speech

recognition passes are selectively performed accordingly to results of a prior pass

(col.12, lines 57 – 59; col.13, lines 15 – 17). One having ordinary skill in the art would.

found it obvious to assign the speech utterance to a plurality of different ASR engines if

assessing resources is within a threshold value occurs when port utilization of two ASR

engines is lower than a predefined threshold of about 75% within Murveit et al., because

that would maintain a high degree of recognition accuracy in the speech recognition

system (col.2, lines 32 – 34).

Conclusion

5.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Baker (US Patent 6,122, 613) teaches a speech recognition using multiple recognizers (selectively) applied to the same input sample.

Murveit et al., (US Patent 6,766, 295) teach an adaptation of a speech recognition system across multiple remote sessions with a speaker.

Sharma (US PAP 2003/0236664) teaches a multi-pass recognition of spoken dialogue.

Brookes et al., (US Patent 7,184,957) teaches a multiple pass speech recognition method and system.

Johnson (US Patent 6,728,671) teaches au automatic speech recognition caller input rate control.

6.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard Saint-Cyr whose telephone number is (571) 272-4247. The examiner can normally be reached on Mon- Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the
Patent Application Information Retrieval (PAIR) system. Status information for
published applications may be obtained from either Private PAIR or Public PAIR.
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USPTO Customer Service Representative or access to the automated information
system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LS
04/03/07

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SUPERVISORY PATENT EXAMINER